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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,341	10/17/2003	Frederick F. Kuhlman	DP-309978	2288
22851	7590	08/14/2006	EXAMINER	
DELPHI TECHNOLOGIES, INC. M/C 480-410-202 PO BOX 5052 TROY, MI 48007			CHANG, RICK KILTAE	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,341

Applicant(s)

KUHLMAN ET AL.

Examiner

Rick K. Chang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/3/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung et al (US 6,979,886) in view of Brusic et al (US 5,960,251).

Hung discloses in Figs. 4B-4C molding an array, singulating along S-S, externally connecting to a PCB, 32 is an exposed die paddle, except for applying an organic solderability preservative (OSP) to the cut portions, applying heat, soldering the IC to a PCB by applying molten solder, OSP is dipped or sprayed after singulating, using die and punch, etching to clean, and imidazole as an OSP.

Brusic discloses applying an organic solderability preservative (OSP) to the cut portions, applying heat, soldering the IC to a PCB by applying molten solder, OSP is dipped or sprayed after singulating, etching to clean, and providing imidazole as an OSP (col. 2, lines 45-46; col. 6, lines 43-67 and col. 7, lines 1-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hung by applying an organic solderability preservative (OSP) to the cut portions, applying heat, soldering the IC to a PCB by applying molten solder, OSP is dipped or sprayed after singulating, etching to clean, and providing imidazole as an OSP, as taught by Brusic, for the purpose of protecting contact surfaces from corrosion.

Art Unit: 3729

It is old and well known in the art to singulate by using die and punch, sawing, laser cutting, breaking, shearing, etc.

Response to Arguments

3. Applicant's arguments filed 8/3/06 have been fully considered but they are not persuasive.

It is old, inherent and well known in the art to deal with the perplexing problems associated with oxidation of metals, namely corrosion, in the electronic industry. The industry uses many different ways to tackle this problem. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hung by applying an organic solderability preservative (OSP) to the cut portions, applying heat, soldering the IC to a PCB by applying molten solder, OSP is dipped or sprayed after singulating, etching to clean, and providing imidazole as an OSP, as taught by Brusic, for the purpose of protecting contact surfaces from corrosion.

Interviews After Final

4. **Applicant note that an interview after a final rejection must be submitted briefly in writing the intended purpose and content of the interview (the agenda of the interview must be in writing). Upon review of the agenda, the Examiner may grant the interview if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.**

Conclusion

Art Unit: 3729

5. Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity (optional). Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (571) 272-4564. The examiner can normally be reached on 5:30 AM to 1:30 PM, Monday through Thursday.

Art Unit: 3729

The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke, positioned above a solid horizontal line.

RICHARD CHANG
PRIMARY EXAMINER

RC
August 9, 2006